

Appl. No. 10/060,310
Amdt. dated March 22, 2006
Reply to Office action dated September 22, 2005

AMENDMENT TO THE SPECIFICATION:

Please replace paragraph [0029] with the following paragraph:

[0029] An exemplary logical unit is depicted in Figure 5. Each logical unit as we have defined it is described in detail below.

Please replace paragraph [0030] with the following paragraph:

[0030] The security client 10 provides security services to data, otherwise referred to as enhancing data, before/after transmission to/from a server. The security client 10 can be deployed in software, hardware, and/or firmware. Preferably, security client 10 comprises a logical unit programmed or constructed to perform server side security and authorization services. Alternatively, security client 10 may be realized by computer readable program code embodied in a computer usable medium such as a CD ROM, a memory, a USB memory device, a SONY Memory Stick™, a disk, a smart card, a flash card, a carrier wave, or other computer usable medium. For example, security client 10 may be realized by software run on a workstation class machine or with a smartcard. Likewise a wireless PDA or cell phone might have the client loaded therein. The security client provides a combination of some or all of the following enhancement services: authentication, integrity, confidentiality and non-repudiation. These services are typically implemented but not limited to digital signature, key exchange, encryption, e.g., 3DES (2 or 3 key), biometrics, signature verification, and decryption. These services are provided in an algorithm and mechanism independent fashion. Any mechanism can be used as long as both security client 10 and the cryptographic gateway 40 support it. For example, authentication may be performed using the RSA, DSA, or elliptic curve algorithms. Optionally, a user might be identified with a biometric like a fingerprint, iris scan, retinal scan, voiceprint, etc. This feature allows the level of protection to be configured based on the sensitivity of the data transmitted. It is expected that new enhancement techniques will be developed in the future. Application of such techniques is contemplated by this invention.

Please replace paragraph [0040] with the following paragraph:

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[0040] More particularly, as illustrated in Figure 2A, 2 security client 10 is preferably configured to accommodate a plurality of security clients 10. Each security client 10 may support one or more protocols, e.g., HTTP, SMTP, FTP, etc., preferably corresponding to a single outbound proxy. However, in alternate embodiments, the security client 10 may include more than one outgoing proxy. Data is enhanced by security client 10 and passed via the outbound proxy or proxies to cryptographic gateway 40. Cryptographic gateway 40 preferably includes at least a sufficient number of proxies to correspond to the outbound proxies of each security client 10, thereby enabling cryptographic gateway 40 to recognize data transmitted from each security client 10. Accordingly, when cryptographic gateway 40 recognizes the outbound proxy and recognizes the identity of the sender, i.e., authenticates the transmission, cryptographic gateway 40 removes enhancements from the data and passes the data on to application server 50. If cryptographic gateway 40 does not recognize the outbound proxy, the data is blocked from passing through cryptographic gateway 40 and, thus, prevented from reaching application server 50.

Please replace paragraph [0052] with the following paragraph:

[0052] Certain application-specific information will be completely ignored by cryptographic gateway 40 while security client 10 could potentially add to this information. The format of the <tag>=<value> pairs in this section should support application-specific authorization checking, all functionality available in Web forms, and maybe some additional features, such as images or other encoded binary data.

Please replace paragraph [0060] with the following paragraph:

[0060] For readability, the resources could be grouped by the application they apply to or some other grouping, but this is optional. Order should not matter when checking authorizations.